

REMARKS

Applicants request favorable reconsideration and allowance of the subject application in view of the preceding amendments and the following remarks.

Claims 42-48, 50-52 and 54-57 are presented for consideration. Claims 42, 50, 51, 56 and 57 are independent. Claims 49 and 53 have been canceled without prejudice or disclaimer. Claims 42, 43, 46-48 and 50-52 have been amended to clarify features of the subject invention, while claims 54-57 have been added to recite additional features of the subject invention. Support for these changes and claims can be found in the original application, as filed. Therefore, no new matter has been added.

Applicants request favorable reconsideration and withdrawal of the objection and rejections set forth in the above-noted Office Action.

Claim 52 was objected to due to a minor informality. Claim 52 has been amended herein in order to overcome this objection.

Claims 49, 52, and 53 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. The Examiner objected to specific recitations in these claims. To expedite prosecution, Applicants have rewritten claims 49 and 53 as new claims 56 and 57, respectively. The Examiner's comments were taken into consideration when presenting these claims. Applicants have also amended claim 52 in light of the Examiner's comments. Applicants submit that these changes overcome this rejection. Such favorable indication is requested.

Turning to the art rejections, claims 42-45 and 47-49 were rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 5,407,350 to Iwabuchi et al. in view of U.S. Patent

No. 6,451,507 to Suenaga et al. Claim 46 was rejected under 35 U.S.C. § 103 as being unpatentable over this art combination and further in view of U.S. Patent No. 6,134,482 to Iwasaki. Claims 50-53 were rejected under 35 U.S.C. § 103 as being unpatentable over the Suenaga et al. patent in view of U.S. Patent No. 5,829,939 to Iwai. Applicants submit that the cited art, whether taken individually or in combination, does not teach many features of the present invention, as previously recited in claims 42-53. Therefore, these rejections are respectfully traversed. Nevertheless, Applicants submit that independent claims 42, 50, 51, 56 and 57, for example, as presented, amplify the distinctions between the present invention and the cited art.

In one aspect of the invention, independent claim 42 recites an exposure processing system that includes an exposure apparatus for exposing a wafer to a pattern on a reticle in a first atmosphere, a reticle stocker having a sealing member having a first gate and a second gate, and an atmosphere controller for controlling an interior of the sealing member to a second atmosphere, for stocking the reticle in the second atmosphere, a transfer path for transferring the reticle stocked by the reticle stocker from the reticle stocker to the exposure apparatus via the first gate and for transferring the reticle used by the exposure apparatus from the exposure apparatus to the reticle stocker via the first gate, and a load-lock chamber for transferring a reticle, which is received from an exterior of the processing system, to the reticle stocker via the second gate, after the reticle is received from the exterior of the exposure processing system and an atmosphere replacement is performed to change an exterior atmosphere to the second atmosphere.

By such an arrangement, in the present invention recited in independent claim 42, by placing the load-lock chamber between the exterior of the exposure processing system and the reticle stocker, an interior of the reticle stocker can be easily kept within a desired atmosphere even if the reticle is transferred between the exterior of the exposure processing system and the reticle stocker.

In another aspect of the invention, independent claim 50 recites a stocker for stocking a substrate covered with a substrate cover. The stocker includes a sealing member, having a stocking station within, for storing the substrate covered with the substrate cover, on the stocking station, a first atmosphere controller for controlling an interior of the substrate cover of the substrate stored by the stocking station, to a first atmosphere, and a second atmosphere controller for controlling a space between an interior of the sealing member and an exterior of the substrate cover of the substrate stored on the stocking station, to a second atmosphere.

In still another aspect of the invention, independent claim 51 recites an exposure processing system that includes an exposure apparatus for performing an exposure process for a substrate covered with a substrate cover in a first atmosphere, a substrate stocker having a sealing member, having a stocking station within, for storing the substrate on the stocking station, and having an atmosphere controller for controlling an interior of the substrate cover of the substrate stored on the stocking station to a second atmosphere and for controlling the space between an interior of the sealing member and an exterior of the substrate cover of the substrate stored on the stocking station to a third atmosphere, and a transfer path for performing a transfer process for

the substrate covered with the substrate cover between the exposure apparatus and the substrate stocker.

By such an arrangement of the present invention, according to independent claims 50 and 51, the atmosphere control can be performed for both an interior of a substrate cover and a space between an interior of a sealing member and an exterior of the substrate cover, in which the substrate covered with the substrate cover is stored on a stocking station within a sealing member.

Applicants submit that the cited art does not teach or suggest such features of the present invention, as recited in independent claims 42, 50 and 51.

The Iwabuchi et al. patent teaches a stocker section 14, a gate valve 93 and a door 104. In that patent, however, the door 104 is provided on a front side with a cassette chamber 102. A wafer cassette 103 is moved in and out through the door 104. Thus, the door 104 in that patent directly communicates with the exterior of the system, and not via a load-lock chamber. Applicants submit, therefore, that the Iwabuchi et al. patent does not teach or suggest at least the arrangement of the load-lock chamber between the exterior of the exposure processing system and the reticle stocker, in the manner of the present invention recited in independent claim 42.

Applicants further submit that the remaining art cited does not cure the deficiencies noted above with respect to the Iwabuchi et al. patent.

The Examiner relies on the Suenaga et al. patent for teaching an exposure apparatus for exposing a wafer to a pattern on a reticle, in which a reticle is transferred to and from the exposure apparatus and is stored in a reticle stocker. Applicants submit, however, that the

Suenaga et al. patent, as with the Iwabuchi et al. patent, does not teach or suggest the arrangement of the load-lock chamber between the exterior of the exposure processing system and the reticle stocker, in the manner of the present invention recited in independent claim 42.

In contrast to the present invention recited in independent claims 50 and 51, the Iwai patent discloses an atmospheric control of an interior of a cassette C and an atmospheric control of a space between the exterior of the cassette C and an interior of an input/output chamber 13. In the Iwai patent, however, the stocking station of a wafer W is positioned at an exterior of a sealing member, and not internally of the sealing member as in the present invention recited in independent claims 50 and 51.

Further, in the Iwai patent, atmospheric control of the interior of the cassette C is performed in which the cassette C is unlocked from a boat holding table 36 on an outer surface of the sealing member. Applicants submit that this arrangement in the Iwai patent is entirely different from the arrangement of the present invention recited in independent claims 50 and 51.

Applicants further submit that the Suenaga et al. does not cure the deficiencies noted above with respect to the Iwai patent. Specifically, the Examiner relies on the Suenaga et al. patent for teaching an exposure apparatus for performing an exposure process for a substrate in a first atmosphere, a substrate stocker having a sealing member and a controller for controlling the atmosphere of the sealing member, and a transfer path for transferring a substrate between the exposure apparatus and the substrate stocker. Applicants submit, however, that the Suenaga et al. patent, as with the Iwai patent, does not teach or suggest at least the features of the present invention recited in independent claims 50 and 51 of performing atmospheric control for both an

interior of a substrate cover and a space between an interior of a sealing member and an exterior of a substrate cover. Therefore, the Suenaga et al. patent adds nothing to the teachings of the Iwai patent that would render obvious Applicants' present invention recited in independent claims 50 and 51.

For the reasons noted above, Applicants submit that the present invention, as recited in independent claims 42, 50 and 51, is patentably defined over the cited art, whether that art is taken individually or in combination.

Applicants further submit that the present invention is patentably defined by independent claims 56 and 57. These claims recite various aspects of device manufacturing methods and have been patterned after certain ones of independent claims 42, 50 and 51. Notably, the cited is not read to teach or suggest at least the exposing steps, which utilize the particular exposure processing systems recited in those claims. Therefore, independent claims 56 and 57 likewise should be deemed allowable over the cited art.

For the foregoing reasons, Applicants submit that the present invention, as recited in independent claims 42, 50, 51, 56 and 57, is patentably defined over the cited art.

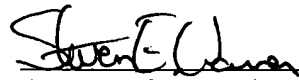
Dependent claims 43-48, 52, 54 and 55 also should be deemed allowable, in their own right, for defining other patentable features of the present invention in addition to those recited in their respective independent claims. Further individual consideration of these dependent claims is requested.

Applicants further submit that the instant application is in condition for allowance.

Favorable reconsideration, withdrawal of the objection and rejections set forth in the above-noted Office Action and an early Notice of Allowance are requested.

Applicants' attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should be directed to our address listed below.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Steven E. Warner", is written over a horizontal line.

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